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ABSTRACT

Two workshops were organized by the American Association of Junior Colleges (AAJC) Program with Developing Institutions at community colleges were good career curicula could be demonstrated. Speeches from the AAJC and twelve community colleges described several innovative programs being developed in career education at the postsecondary level. Topics discussed included current status, elements of curriculum design, student selection, recognition of technical competence rather than formal education in faculty selection, cooperative programs, problems facing innovative programs, meeting the needs of industry, career guidance services, adapting the curriculum to student needs, core curriculum, career ladders, criminal justice education, human services programs and communication skills. A short appendix describes autotutorial materials for teaching auto mechanics developed by Central Piedmont Community College. (SA)

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CAREER CURRICULUM BUILDING IN THE COMMUNITY COLLEGE

Selected Proceedings of Two Workshops:

(1) Central Piedmont Community College,
Charlotte, N.C., March 23-25, 1972

(2) Community College of Denver
Denver, Colorado, May 4-6, 1972

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Washington, D.C.

Edited by Kenneth G. Skaggs and Selden Menefee

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On July 1, 1972, the American Association of Junior Colleges will change its name to the American Association of Community and Junior Colleges.

CAREER CURRICULUM BUILDING IN THE COMMUNITY COLLEGE

INTRODUCTION

In December, 1971, the AAJC Program With Developing Institutions mailed to the 68 junior and community colleges, funded for participation in this program, a short questionnaire, designed to assess the felt needs of the colleges for workshops at the national level early in 1972. During the fall of 1971, five such national or multi-regional workshops had been held on the needs of low-income students, and programs for meeting these needs (see PWDI monograph No. 16, March 1972). Now the question was were there other high-priority needs that should be met by the national office before the program ended its fourth and final year of operation? Several possibilities were listed.

Of the 41 colleges who expressed interest in sending participants to workshops on other topics, by far the largest number (38) expressed a preference for workshops on career education curriculum building, particularly the core-ladder-branching concepts which are proving most useful and economical wherever they have been adopted. (Runners-up were management by objectives, with 32 colleges interested; and human potential seminar training, with 24.)

With the help of AAJC's specialist on career education, Kenneth G. Skaggs, the decision was reached that two workshops were feasible, one for the East and one for the West. Locations where good career curricula could be demonstrated were chosen, and host colleges were invited and accepted: Central Piedmont Community College in Charlotte, North Carolina, for a workshop March 23-25; and the Community College of Denver, May 4-6. Programs maximizing small group sessions and "how to do it" demonstrations were planned. In Denver, the Western Interstate Commission for Higher Education (WICHE) and the Colorado State Board for Community Colleges and Occupational Education agreed to co-sponsor the workshop with AAJC.

When the workshops were held, attendance in both places exceeded expectations. Whereas in a specialized workshop of this type 45 to 60 persons would have been considered good attendance, actually about 80 attended the Charlotte workshop and 110 attended the one in Denver. The registration fee was set at $20.00 per person (including a dinner and refreshments) to make the workshops self-sustaining, and with attendance high, this produced enough extra revenue to make publication of these selected proceedings possible for distribution to funded colleges and workshop participants.

An evaluation form was distributed in the final session of each workshop. Of those returning the forms (35 in Charlotte and 44 in Denver) 77 per cent in Charlotte and 66 per cent in Denver gave the sessions one of the two top ratings on a five point scale -- "Very valuable" or "Of considerable value."

Special thanks are due to President Richard Hagemayer and Vice President Don Harbert of Central Piedmont Community College, and to President Leland Luchsinger and Director of Public Information Mary Buerger of the Community College of Denver for organizing local resources and making the two workshops successful. Our thanks also to Mrs. Helen Minifie and Mrs. Ethel Simpson for their assistance in preparing the manuscripts for publication.

The AAJC Program With Developing Institutions has been financed by grants to colleges under Title III of the Higher Education Act of 1965, administered by the Division of College Support, U. S. Office of Education.

Selden Menefee

Director, AAJC Program
With Developing Institutions

CAREER EDUCATION IN THE SEVENTIES -- BOOM OR BUST?

By Kenneth G. Skaggs, Specialist
Occupational Education, AAJC

If we accept the premise that the nation faces an acute shortage of personnel in the service and supportive career fields, then we must make the most effective use of the nation's two-year colleges, both public and private, to educate students for all kinds of occupations. Moreover, greater emphasis must be placed on devoping more effective and more precise curricula for such students than has been the case in the past.

In 1970 our nation had a population of 204,800,000. 30,176,000 of these people were between the ages of 15 and 29 years, these years representing the greatest enrollments in our colleges. By the year 2000, population projections show the total may reach 271,082,000, with 62,348,860 between the ages of 15 to 29. The total figure tells us something of future increasing demands for services and supportive personnel merely to keep up with an expanding population, and increasing societal needs, while the age group figure denotes the number of potential trainees and young workers by the year 2000.

The National Association of Manufacturers tells us that industry will require 31.5 million new employee entrants with less than a four-year college preparation period between 1972 and 1975. About 23 million of these people will need occupational preparation based upon an educational program. Furthermore, a June 1970 report from the U. S. Labor Department states that "eight out of ten jobs to be filled over the next ten years will be filled by young workers with less than a baccalaureate degree."

Here, then, is the challenge: Are we in the community and junior colleges ready to move ahead in developing more viable career programs than we have in the past? The answer will depend mostly on how we meet the problems now arising from the sometimes confused, chaotic field of work. The question for the two-year colleges may well be: "Career education -- boom or bust?" For in all reality, we may fail if we are overwhelmed by our problems, or simply satisfied with our problems, or simply satisfied with our present role, or too blind to have the vision to meet the tremendous challenge of the Seventies.

First, an examination of the current status of occupational programs in our colleges may help to clarify why many today believe that confusion and chaos is setting in. Again, the National Association of Manufacturers has made an interesting assessment of some of our troubles. Paraphrased, these add up to four major obstacles:

(1) Society's current emphasis is still on obtaining a baccalaureate degree.

(2) Students view many jobs as dead-end, menial, dirty, undesirable socially. Thus, recruitment into many career areas is extremely difficult. Also, an artificial social status is imposed upon certain career opportunities; some jobs are "socially acceptable"; others, though very important to society, are not.

(3) The high cost of offering some occupational programs is a major discouragement to career curriculum planning. Unfortunately, costs are still rising, and may go much higher, until much occupational education could be priced out of the field entirely.

(4) There is too little effective feedback, and too few evaluation systems, for good planning. As a result, colleges cannot effectively set their objectives, control or plan for future occupational needs of students or the community. Nor can we adjust, expand, or change current programs effectively to meet a constantly changing and growing technology.

The two-year colleges have met demands up to the present time pretty well, as shown by a study made by Western Illinois University under a contract with the American Association of Junior Colleges. As of November 30, 1970, there were in community and junior colleges 10,724 separate two-year occupational education programs leading to the associate degree for job entry; also 3,710 less-than-two-year certificate programs; 2,407 continuing education or adult occupational programs; and 3,969 occupational education programs in developmental and planning stages to be opened by 1972. If all these programs are added together, the two-year colleges are offering a total of 20,810 programs, based upon this report. However, a spot survey early in 1972 indicates about a 14 percent increase in programs, both in operation and being planned, over the 1970 figures; so a current total of some 29,134 separate programs may be in operation or about to start in 1972, with well over a million students enrolled. In 1975, it was fairly accurately estimated that about 14 percent of all students in community and junior colleges were enrolled in occupational education programs; today our figures reveal about 40 percent are enrolling in these programs or about 1,120,000 students. Some states report higher percentages: Massachusetts, 60 percent; New York, 50 percent; Illinois, 52 percent; and California, 50 percent, using a broad definition of career education.

There are other signs of the "gathering storm" in occupational education; a task force of the Educational Commission of the States has identified these very clearly. As we move rapidly toward expansion of programs -- and because of increasing numbers of students enrolling in occupational education programs and seeking job entry

upon completion, because of a greater sophistication of technologies, and because of a clearer identification of the role of the two-year college in meeting manpower needs in careers of all kinds and levels -- more and more and more college administrators and program directors (along with the task force) are reaching the conviction that occupational education is not something apart from the total context of education, but a vital part of the total context.

Moreover, the emphasis upon skill preparation only is weakening and becoming less important. Occupational education curricula must be broadened to include the cluster approach to career preparation, necessary for proper orientation to gainful employment and career planning. Such orientation must take place earlier than we now have it.

Finally, occupational education is integral to the educational process at all levels, and not an alternative to it; so all planning for education must include occupational education within the total framework of the educational institution, and in its goals and objectives.

In the presentations of those who follow me, the efforts of many institutions to break the traditional mold of the past in curriculum planning will be revealed. Their efforts to find new, vital, and more effective ways to meet student needs will be demonstrated, and it is hoped that stimulation to new thought, new approaches, and vitalized planning will characterize what we do here. That's what it's all about. And in the new approach to curriculum planning, perhaps we can find ways to come through the chaos and confusion with a sharper program defined, and new opportunities for our students to find careers that offer satisfaction and productivity through the new kinds of career preparation now in sight.

New ideas and new ways of teaching and learning are springing up all around us. A brief mention of a few, I hope, will sharpen your anticipation for the demonstrations yet to come:

-- a new focus on the allied health careers programs, with expansion of a beginning year in the high school, coordinated with the last two years in the community or junior college -- a focus on the future: the three-year allied health program!

-- the combined classroom and on-the-job managerial training program, now found in the College of DuPage (Illinois) and other colleges.

-- the development of a true core program in the various clusters of curriculum.

-- the decreasing importance and effectiveness of the so-called classroom lecture method, and the growth of all kinds of new ways to teach and learn.

-- the growing use of well-directed, well-supervised independent learning, peer group learning, and the use of all the current media.

-- the team teaching concept.

-- the concept of non-punitive grading.

-- a flexible, individualized learning process geared to the student's most effective speed of learning.

-- the increased emphasis upon <u>doing</u> as a part of learning.

If we are to find our true place in American education, we must alert ourselves to the avenues of opportunity for our students distinct from the conventional and traditional college preparation procedures. These avenues have already been paved and opened in many community and junior colleges across the nation. More and more we are turning our backs upon ideas once thought to be sacred, to be immutable in the learning process. The new research in education has told us many startling things, all with import for the new curriculum. For instance:

(1) There are many evidences of clearcut relationships between mathematics and the physical sciences and occupational education (as far as student learning is concerned), but little evidence of meaningful relationships between occupational education and English, humanities, or the social sciences can be found in today's curriculum, although such relationships are needed.

(2) The amount of so-called student discussion, recitation of learned material in the classroom, or student-to-student verbal reaction as a part of learning has no significant effect upon depth of learning by the student.

(3) Student participation in a class exercise, so-called, or the amount of it, has no value as a criterion for evaluating student learning.

(4) The current methods of testing students, examining them through the "finals," are among the least valid of all our teaching devices. Also, they have no value as a "motivating" process.

What, then, is valid in the development of curriculum?

-- Student interest can be generated through a clear understanding of why he should learn the materials and skills, where this learning will lead him, and a full understanding of how he, personally, can achieve effective learning.

-- We should develop curriculum so that the student learns progressively, a little at a time, becomes skilled and expert, and uses what he has learned to advance in his skills and expertise.

-- The role of the teacher should be that of a leader for learning -- but always with the emphasis that the student learn by his own doing.

-- We should identify the student as a worker in his chosen career early in the game, with emphasis upon the "time is now," not upon "after awhile you will be thus and so."

-- Variety is needed in learning experiences.

-- Continual evaluation of the student's work is essential.

-- The student should be clearly shown relationships in the work he or she does -- with de-emphasis upon courses, and an emphasis upon total educational program.

We cannot learn for the student. He has to want to learn. We can only lead. At Central Piedmont Community College, they get nursing students into nursing the very first day. Universities often force students to wait one or two years. They lose interest and change their plans as a result. We need to make learning immediate in the chosen field -- and use a variety of methods.

We are long overdue for a complete overhaul of our course and program structure. Examine, if you will, your own curriculum offerings in the light of the NOW student, this pioneer of the 21st Century, and his NOW way of life. How much of what we are doing in our colleges has real relevancy to the life our students will be living in the 21st Century? And you are preparing them for the technology of the 21st Century!

For the most effective teaching in our occupational education programs, re-vitalize your curricula with the stuff of a new age, with a new approach, with new understanding. Relate your programs of study to the individual student, this new creature from a new age, who will be serving a new society. Look with him into the frightening dusk of the uncertain future. Suddenly you may see him and his needs with a new comprehension, and the glass through which we are now darkly gazing will become clearer.

ELEMENTS OF NEW CURRICULUM DESIGN

By Lewis R. Fibel
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It's always a pleasure to appear on the same platform with Ken Skaggs. There is no one in the country that has his ability to look at the big picture and to paint in broad brush strokes the nature of the tasks that lie ahead.

I've had the privilege in the past several months to be able to sit back and examine the rationale for what I -- and others -- have been doing for many years about occupational education in the community college. I've become interested in the process more than the product, and I would like to share with you this morning some elements of my new thoughts on career curriculum development.

The comprehensive community college has emerged as a potent force in American higher education in the last decade. The uniqueness of the community college lies not in any single program that it offers, but in the combination under one roof of programs for transfer, occupational, and developmental programs, community services and counseling and guidance. The success of the community college may well lie in its ability to synthesize these diverse programs into an integrated whole which serves to extend higher education opportunity to more people in its community.

Occupational education programs have evolved as a major means by which community colleges fulfill this extension function. While occupational programs are not solely the responsibility of community colleges -- other institutions also make significant inputs -- the community college is a very important agency for supplying trained manpower in certain fields.

An occupational education program should have as its objectives two inter-related goals: (1) preparation of an individual who, with a minimum of supplemental on-the-job training, can perform efficiently and effectively in a specified job area; and (2) contributing to the development of that individual as a person, a parent, a citizen, and a worker. This second goal has vocational as well as general education facets. It is, in part, that aspect which gives the individual the potential for promotion within his area of employment and the ability to move laterally across that field as personal or economic conditions may dictate.

These two goals are intimately interwoven. However, I shall make an artificial separation, for the purposes of my talk, and shall talk first about preparation for immediate employment, and then re-weave the total fabric.

The evaluation of a program to prepare for employment involves essentially three steps: (1) a statement of job requirements; (2) the development of the curriculum; and (3) the assessment of the worth of the product -- the graduate. Ideally, this should be a continuing and circular process. The assessment of the graduate should result in insights to be fed back to modify and to improve either the job requirements or the curriculum or both.

The first step -- development of job requirements -- is correctly a function of potential employers. It is very important to ask employers the proper questions. They are not competent to say what should be in the curriculum; they are competent to say what skills, knowledges, and attitudes an employee needs on the job.

I recommend that a questionnaire be developed to determine employer views on these matters. The best technique, I think, is to ask a representative to list the tasks that the employee will perform. The list of tasks submitted should then be rephrased in terms of the skills, knowledges, and attitudes that are required to perform the tasks. This should be re-submitted to a group of employers, refined, and catalogued in terms of importance and priorities. Advantage should be taken of similar analyses that have been done by others. It's particularly worthwhile to incorporate the findings of national technical and professional societies.

The response will vary with the level of the respondent. My experience has been that immediate supervisors are much more practical, higher echelon people much more generalized in their responses. Also, interviews are likely to be more useful and effective than mailed questionnaires. (They also require more time and cost more money.)

This replicative process should eventually result in a weighted list of skills, knowledges and attitudes that expert opinion considers necessary to perform a specified job. This is step number one.

The second step is the conversion of the skills list into curriculum content. In practice, most curriculum development starts with this phase. Curricula are constructed with scissors and paste pots from what textbook authors, other colleges, or national societies have recommended. The determination of curriculum content should be the responsibility of the faculty that will teach it. Although I cannot guarantee that curriculum construction by the faculty will result in a better product, I am convinced that the process, itself, is a useful, perhaps an essential exercise for the faculty.

The first caution is that not all of the available time -- say ninety or so quarters for an associate degree program -- can be utilized to achieve the goals of immediate employment. Some time must be allocated to achieve general education goals, within a framework of time into which the specific employment objectives must fit.

At this point, faculty will unvaryingly complain that there is not sufficient time left to accomplish <u>their</u> objectives. I'm well aware of this complaint, and I have great sympathy for it. I will return to this later.

The skills and knowledges required must now be assembled into a series of learning experiences for the students. These must be arranged into groups -- units, modules, and courses.

Before proceeding further, some attention should be given to the nature of the prospective students. Data considered should include measures of ability, aptitude, motivation and interest, among others. It is a rare college that regularly collects much data of this sort, and an even rarer one that makes good use of the data it has collected, but we are speaking of the model college here.

Various of these measures can be used to predict success <u>in</u> the program (please don't equate that at this time to success <u>of</u> the program -- i.e., success of the graduates on the job). Any prediction of success in the program is a probability function. It can be nothing else. It says that with an average score of 80 or better on tests, 65% of the individuals will achieve a 2.0 grade point average or better. This is also the probability of success of any individual, but, of course, it does not identify <u>which</u> individuals will secure that grade.

It is possible to set an entrance requirement for the program. I don't know whether or not your administration will approve, but nevertheless, it <u>is</u> possible. The point I want to make is that by adjusting that entrance requirement up or down, you can vary the percentage of successful completions. It can be decided, a priori, that only students that have one chance in two of being successful (i.e., the probability of success is 50%) should be admitted; this means, of course, that, statistically, half will fail. But you can adjust the pass/fall, succeed/not succeed ratio any way that you want. This is a phenomenal subject to control.

This may sound like a violation of the open-door policy, but it isn't. In fact, it isn't a policy at all -- it's just a statistical fact of life. It is commonplace to say that community colleges should admit students who can benefit from the instruction. I would merely translate this to say, "students who have a reasonable chance

of success." However, what is reasonable is both debatable and and controllable. But if it bothers you, do what many community college advocates recommend - establish a developmental (or remedial) program. This serves two purposes: It provides opportunities for the failing half of the students above, and it sets a starting point for curriculum development. The first may salve your conscience. It may also help some students (I don't know how many). The second point is sure to help, because it enables you to shorten your curriculum by assigning some portions of it to the developmental or pre-curriculum curriculum. This is not only possible, but in fact is being done in a number of institutions. It's entirely respectable.

Back to the curriculum. You can now strike from the list those items which have been relegated to the entry requirement. Still too much to fit? Either cut at the bottom -- more material in the prerequisite; or cut at the top -- end up with lesser achievement.

I wish to make one more point about the curriculum. I have hypothesized (elsewhere) that attaining additional equal increments of a skill, e.g., typing, costs progressively more money. This applies either to the individual or to the average of a class. In simplified (and arbitrary) terms, if one can raise the typing speed of a class to 10 words per minute for an expenditure of $20 per student, it might cost $30 more, a total of $50, to raise that speed to 20 WPM; $70 more (total $120) for 40 WPM; $150 more (total $270) for 80 WPM. In other words, there are practical economic aspects to the extent or depth of training. Decisions can be made on the basis of benefits and costs, rather than just happening.

I have been leading you to a curriculum with a bottom determined by student ability and a top by benefit/cost ratios. I haven't told you what's in the box -- that's your job. But I would hope that you would describe the content in behavioral objectives so that a little later we might measure better its effectiveness.

However, you cannot divorce curriculum content from the instructional methods used. These are also determinants of success probability. Ken Skaggs has suggested to you some of the innovative approaches that are being tried. There are many others. I am convinced that there is no one instructional method that can work best for all students -- students who differ in motivation, in ability, in learning style. Maximum thrust can be obtained only by using a combination of methods suited for the particular student population to be helped.

Let me suggest one additional step. From the curriculum, develop a set of specifications of what the graduate should be able to do. Reconstruct the tasks that can be performed. It is

not uncommon that graduates of occupational programs are either under-utilized or over-utilized by their employers. I think that potential employers would find most useful -- and novel -- a release from a department of a community college, setting forth exactly what the capabilities of its graduates are.

I'm mindful of two things. First, the faculty of community colleges are expected to carry a heavy teaching load. Not easily will they find time to do the long, painstaking analytical procedure that I have suggested. Only the truly dedicated will persevere. Nevertheless, I believe that this is the correct approach, and further, that money and released time should be provided to effect it.

The second thing is the faculty often feels that they have no input in determining job requirements or curriculum content -- that these are matters that are determined by others. This is certainly true to some extent, but I strongly believe that the process that I describe next will insure more faculty involvement in these matters.

My basic thesis is that evaluation is intrinsic to curriculum and cannot be separated from it. A fundamental purpose of evaluation, indeed, is to change the curriculum. If you are involved with one part of the process, you must be involved with all of it.

Let us turn, then, to the third major step in the process -- evaluation. Remember, I defined the main purpose of the program as providing competencies for success on the job. (This, of course, is a limited definition). Then, of course, it must follow that program evaluation consists primarily of knowing what happens to your graduates.

This is simplistic. I would suggest immediately two additions. First, that you also find out what happens to the non-graduates, the drop-outs of the program. Should they prove to be successful in the jobs for which you are training, it would offer prima facie evidence that your complete program would have over-trained some students. Second, you should also study the success of persons that have been trained for those positions by other means -- e.g., on the job. This provides a prudent check on the benefits of your method versus others.

In many community colleges, the responsibility for placement of graduates in jobs and for follow-up data on their success has been given to a placement advisor in the student personnel office. But this does not relieve the instructor from the responsibility of finding out what the placement officer has learned and influencing the kinds of information that he seeks.

The most common follow-up procedure is a mailed questionnaire. This is inexpensive but has severe limitations. We seem to be a society prone to questionnaires. It's a rare week that I don't get several. I answer those that I think important and throw the rest away. If I have a strong negative reaction -- something I dislike -- I'm more likely to respond than if I have a mildly positive reaction. Answers tend to be skewed by those who have an axe to grind. People need an incentive to answer. Money would be a good one. If you paid $5 for the return of each questionnaire, you would probably have no trouble getting nearly all of them back.

But since you can't do that, convince your students and graduates and their employers that their answers and opinions are important. Assure them that their answers will be considered; send them a recap of the total survey. Involve the students while they are in school so that they feel they have a stake and a voice in the program. Involve the employers via advisory committees and other structures so that they, too, feel that this is <u>their</u> program. You will get more and better answers.

Interviews are superior to mailed questionnaires for precise information; they also are more expensive in time and money. However, I recommend that interviews be held either periodically or on a small sample each time in order to validate the data and to find other areas of inquiry.

Follow-up studies should start with accumulation of basic data. For what company does the graduate work; under what job title; for how long; at what salary? Both employer and employee should be asked. This provides a measure of reliability, and serves also as an excellent public relations device.

The next area of investigation should be the relation of the job to the training secured. In extensive surveys, such as those carried out in compliance with the provisions of the Federal Vocational Education Act, this is usually accomplished by directly asking that question to the student. I have doubts about the validity of this approach, and I recommend instead that the student be asked to describe his duties, and a panel of experts then decide the extent to which the job was indeed related to the training.

Still more important to know is the relevance of the curriculum in relation to the tasks performed on the job. This is the most significant aspect of a career educational program. It provides the ultimate validation of curriculum content, and of the learning that has occurred. A good technique is in-depth interview of both employer and employee, followed by analysis of the data by a group of the faculty.

The measurement of satisfactory performance by graduates of a curriculum requires the establishment of criteria. These should be set in advance. A basic question is whether to seek satisfactory placement of all graduates, or to seek more graduates with a lower success ratio. For example, the college must decide whether it is preferable to graduate 20 nursing students, of whom 90 per cent pass the State Board Exam, yielding 18 nurses for the working force; or to graduate 32 students, of whom 75 per cent pass the exam, yielding 24 new nurses. This is not an easy decision, but it is an area in which decisions <u>can</u> be made.

However, the basic purpose of follow-up evaluations is to provide input into curriculum content. One option available is to modify the job requirements instead of the curriculum. For example, in a secretarial program, the evaluation might suggest that the objectives be lowered to prepare a stenographer rather than a secretary, or raised to prepare an executive secretary, narrowed to prepare a legal secretary, or broadened to prepare an office manager or some combination of these branching programs.

Any decision can be legitimate and profitable. What is wrong is the avoidance of a decision. "Not to decide is to decide."

Follow-up studies also yield valuable data on technological change. Has the use of electronic dictating equipment made heavy inroads into the use of shorthand? To what extent is accounting done by the computer? What is the trend for the future? Are there curriculum implications?

Do you need a program to prepare for the retailing field? Are graduates of a general business management program satisfactorily filling jobs in that field? Is the mobility of graduates suggestive of the desirability of core curricula with many options? Does it suggest a ladder curriculum to keep open possibilities for promotion; a lattice to enable the student to slip in and out as he feels the need?

In summary, I have tried to describe a broad pattern for curriculum development of which evaluation and feedback are essential ingredients. The process involves the determination of job requirements, their conversion into curriculum content in light of student capabilities, and the evaluation of the results to provide input for change, and all of this on a continuing basis. I firmly believe that this process will result in a better curriculum. More important, however, I believe that the process will provide you, as faculty members, with a greater feeling of satisfaction in your work. Dissatisfied teachers make lousy teachers.

Curriculum development for career programs in community colleges is a profitable, challenging, exciting, and rewarding field.

NEW APPROACHES TO CAREER EDUCATION

By W. Robert Sullins, President
New River Community College
Dublin, Virginia

Lew Fibel has suggested that we throw out the term "innovative," and I agree with him as far as our efforts at New River are concerned. We are eclectic in our efforts. We have copied a number of innovations. We have felt that a variety of approaches would lead to a greater success ratio as we meet more individual needs; and I am here to discuss kinds of programs and means of communicating those programs which have been successful in our particular setting, a small town in rural southwestern Virginia.

First of all, I would point out that the programs we offer are not particularly unique in content. Our career package includes business management, accounting, secretarial science, law enforcement, practical nursing, automotives, drafting and design, machine technology, electronics, industrial electricity, and instrumentation. The uniqueness of our offerings in these career programs is primarily found in the variety of techniques employed, by the faculty and staff, in providing opportunities for the students to learn.

One important aspect of our programs which is not new to us, but appears to be as yet undiscovered in some other areas of the country, is the recognition of technical competence in lieu of formal education in the selection of faculty for career programs. Our first concern has been to find faculty members with the practical knowledge and technical competence to provide students with marketable skills as well as a required theoretical base. Of 23 faculty members in the career programs, only five have degrees; and while most of the others are currently enrolled in Bachelor of Technology programs in nearby colleges, we already consider them to be fully qualified for the positions they hold.

The interest shown by these faculty members in the new Bachelor of Technology and Bachelor of Applied Science programs has led us to our next new approach -- that of articulation with four-year colleges. This articulation is relatively a new consideration, since until just recently career education was called "terminal" education. The fact that community colleges and technical institutes forced the four-year colleges to add these programs, through the sheer demand of numbers, should not obscure our responsibility to work with those colleges in the articulation process.

The addition of these baccalaureate opportunities has for the first time opened the vocational-technical or career opportunities for students to move from career programs at the lowest level right on through the doctorate if they so desire. I consider this new freedom, this new option, to be the most significant breakthrough

for career education in this century.

No longer will elementary and secondary counselors and teachers have to be wary of possible damage to Mary or Johnny when they recommend career programs. In the past, counselors had to worry about parents' ire if Johnny suddenly decided to continue his studies in a four-year college but couldn't. Now Virginia's Chancellor can really say "Our only terminal program is the mortuary science program at John Tyler Community College."

As proud as we were of our programs at New River, there were a few minor changes required to make them acceptable to the four-year colleges within our area. They demand an associate degree including the English and other general education courses normally found at that level. We had been granting a "diploma" for the two-year industrial technology programs. We could have stuck our heads in the sand and attempted to force the four-year colleges to take our students as they come from us, but we felt a responsibility to attempt to meet these colleges at least half way. A few minor changes in our curricula allow our graduates now to qualify for the B. T. (Bachelor of Technology) programs available in our region. Math, physics and English are the primary areas of change, with minor changes in the first two. The English requirements for the degree assure a reasonable degree of success at the junior-senior level.

Our efforts to articulate upward led us to this area of change. Heretofore, our career programs in the industrial technologies had been offered only at the diploma level. The few minor changes made brought these programs to the level of our A.A.S. (Associate in Applied Science) degree programs in terms of all general education and technically related areas. We now have three options available in each technology, starting with a one-year certificate program available in the day and evening programs, and two-year diploma and associate degree options.

These B.T. and B.A.S. programs are still too rare. We need more on a regional basis throughout the country to "cap off" business, engineering, industrial and health technology programs. And our two-year diploma program is still available for the students who wish to take the entire course as far as the technology is concerned, but who wish to follow a lighter path in general education areas.

A valuable result of these changes has been the deletion of an undesirable differentiation between transfer and non-transfer courses and programs. Courses for the diploma had been designated with numbers less than 100, while degree-level courses carried one or two hundred level numbers. Courses which had been non-transferrable do not necessarily transfer, but we do not say they cannot.

The three possibilities run concurrently; in fact, in each technical specialty class there is no differentiation between the students. They may transfer back and forth between options, and a diploma graduate may qualify for the associate degree with no more than two quarters of work in general education and technically related courses.

A corollary responsibility which was immediately felt by our staff was that of articulation with the area secondary schools. Technical education is experiencing a new-found popularity in our area. Three secondary schools already have well-developed programs, and by 1973 all of our school systems will have comprehensive high schools with a wide variety of technical programs appropriate for some hook up with ours. We have encouraged this development because of its value in increasing the holding power of students.

We had traditionally had provisions for advanced placement in typing and French, but had gone hardly any further. Now we are developing extensive articulation plans with secondary school personnel in our region to provide the maximum feasible advanced placement for students of machine shop, drafting, automotives and so on. The acceptance of this plan has been gratifying. We have for two years accepted machine shop graduates at the third or fourth quarter level. And students who might have gone directly to work are now continuing to develop their technical skills at the college.

Advanced placement of students from secondary school programs has led us to a new look in providing credit for a variety of experiences such as service and correspondence schools, actual job experience and any other experience the student might propose for consideration . . . faculty members are finding an increase in applications for credit by examination, and I am certain that this trend will continue. In fact, faculty advisors are encouraged to look for more credit by examination or proficiency activities.

The spin-off of credit for job experience has led us to the implementation of an "oldie" in technical education. We are seeking to provide cooperative educational experience for all our career graduates. (In fact, we are doing much the same thing in some of our college parallel programs, as education majors serve as tutors and sociology majors work with welfare and community action programs.) We hope to be able to provide the opportunity for all of our students to "work and learn" during the summer quarter between the first and second years or during the regular academic year. We are currently thinking of an optional program, but if sufficient spaces can be found we may eventually place more emphasis on work experience to the extent of requiring at least a small portion of real experience.

These cooperative experiences provide all the traditional benefits of adding relevance to the coursework, good public relations, industry's chance to look at prospective employees, students' chance to look at industry. Moreover, faculty members have the opportunity to see whether their program really trains the student.

Another benefit of co-op education is the "distribution of costs" for special training, as suggested by Dr. Lewis Fibel in the March issue of Technical Education. If a local industry plans to hire a machinist upon graduation but they want him to be prepared to specialize in a certain area not economically possible at the college, his sixth quarter lab work might well be performed at the industry in a cooperative education experience. This concept could be applied in any of our career programs from nursing to automotives and from drafting to accounting.

Employment of the core concept in two specific areas has helped us greatly. The three electronics-related programs at New River utilize an identical freshman year base in basic electricity and electronics. At the end of the first year, students may choose to specialize in electronics, industrial electricity (power production and distribution), or instrumentation (installation and maintenance of electrical, pneumatic and hydraulic controls). It would not be feasible for us to offer all three of these related programs without this core approach, and this economic consideration led to its implementation.

But the student also accrues a significant benefit. He is not required to make his choice of programs until he has had an opportunity to explore the options and make a more intelligent decision.

The second area of core application is being made in our math department. Frank Bailey, the math program head, has conducted a national survey to identify the core concepts commonly required in each of the technologies offered at New River. He is now placing the concepts in sequence so that a four-quarter math course might serve all the technologies. Currently, it seems that the automotive students might take the first quarter only, machine shop students will take two quarters, drafting students will take three, and the electronics area students would finish in four. He might find that it isn't quite that simple, but it looks good so far. The project is programmed for completion this quarter so that it can be implemented by next fall. Ultimately, he will write the series of textbooks to provide the proper sequence with ease.

In the shadow of Central Piedmont, I am almost embarrassed to describe the extent of our development of learning packages, but we do have a few notable examples. Through a federally-funded project, our machine shop faculty developed slide-tape packages for the entire lecture portion of this two-year curriculum. Now we

may accept students anytime during the year, while previously we invited enrollments at fall term only. Our drafting department has packaged a blueprint reading course which is common to all the technologies.

All of our faculty members are studying the application of this approach to their specific areas, and we expect a mushroom effect to develop by next year. In particular, our business and secretarial programs will be the most likely to move quickly in this area. We are very pleased with the results of the little that has been done, little as it is compared to the Charlotte effort. I should add that our entire work in this area stems from a tour of Central Piedmont by some of our staff members last year.

Virginia's backward correctional bureau has been the site of another breakthrough. Our local road camp provided a base for off-campus study of developmental programs. Five of the most successful prisoners are now on our campus as full-time occupational-technical students. They are doing a fine job. One, eligible for work release, will become an audiovisual technician as soon as possible.

We also have a special training division which, in conjunction with specific colleges, provides training for new employees of new and expanding industries. This has produced new income to the state through taxes paid by previously unemployed or underemployed workers trained in this program. The return has more than equalled the expenditure. We must convince governors, legislators and others that such programs are a valuable investment.

We have benefitted from a number of federally-funded projects -- developing institutions, vocational education and others -- which have permitted us to have consultants on campus, to send faculty to view successful innovative attempts, and to purchase equipment and materials.

But even without funds from external sources, it can be done. It is a matter of priorities -- an additional English teacher, another lathe, or $9,000 for curriculum development. We have felt that at least a small portion of the budget should be allocated to encourage innovation, curriculum development and change.

PROBLEMS OF AN INNOVATIVE COLLEGE
By Dr. Richard Hagemeyer, President
Central Piedmont Community College
Charlotte, North Carolina

What brought about the atmosphere conducive to new approaches here?

We faced some problems when we started up here nine years ago. It became very apparent that we had to destroy a lot of sacred cows if we were to succeed. We did it by asking "Why?" and "Why not?"

Another problem was how to finance good career programs. State and U. S. funds and tuitions account for 87 per cent of our income. In North Carolina, funds come each year according to how many students came last year. We have been growing 25 to 30 per cent a year, so it became a real problem to make ends meet. Growth was a real handicap, financially.

We had to increase our productivity without losing quality, some 80 percent of our students' work, full or part time. Also, they are older, generally. We asked ourselves: Is it necessary to hold to the traditional lecture and laboratory pattern? Doctors have trained assistants to do lab tests -- why can't colleges use lab assistance in the learning process?

So we experimented. Take accounting: We get people competent to answer questions in the open lab, 40 hours a week. Competence, not degrees, count here. Faculty are nearby, if they are needed. The students come when they can, any time from 8:00 a.m. to 10:00 p.m. The system works well.

We get a lot of visitors on this campus, too. We learn from them, and they learn from us.

One thing we know: traditional methods don't work with a lot of students. The learning lab helps those who don't learn much from lectures. Why bore students by requiring them to sit in lectures if they don't learn? Let them go to the lab and their time will be better spent.

We have a very heterogeneous student body -- from slow to brilliant. They are not selected on the basis of any test. Our doors are open. So you get all kinds. For some, it takes longer; repetition is needed, and demonstrations. Not to allow for this is like a doctor saying, "If you're not well by June 15, I will pronounce you dead."

We have a dedicated faculty, too, trying many new paths to learning. They are ingenious in finding new ways that work . . .

We listened to employers in the community and local government. They needed people who could work with people, and who want to help others. This was the genesis of the Human Services Associate program. The first two quarters are the same; then they branch into special courses -- children's music, folk music for the aged, etc. -- the better to serve special groups like the very young and the aged.

We have a child care training center on the campus. This gives our child care trainees experience, and provides day care for children who need it. Also, nursing students are given experience with well children. The WIN program, to train welfare mothers, also routes trainees through there. The 90 children in our center are from faculty families, nursing students and welfare families. We have a long waiting list. Our Human Services program really works.

DENVER WORKSHOP

MEETING INDUSTRY'S NEEDS

By Richard W. Wright, President
Mountain States Employment Council
Denver, Colorado

Our economic machine is immense and complex. It requires an amazing range of work skills to produce those goods and services which make us the great country we are. It will continue to provide these jobs unless it is throttled by legislation or a change in our form of Government. So rather than examining the narrower area of what industry needs from our educational institution, we should examine the needs of our people. For these needs are basically the same.

First, the needs of the people. The values most Americans hold dear include these: (1) Each man living under equality of opportunity should work at a job of his choice within the limits of his ability; and (2) Economic well-being is indispensable to the freedom and dignity of the individual. The need then is to provide a system which assures that people are prepared to become employable. The appropriate question here is: "How well are we meeting these needs?"

A second question we must answer is: "Who are the people that have these needs?" Here are some of the groups that we must be concerned about:

* The forty million elementary school children, who need career orientation.
* The 7.5 million young people who seek employment after graduation from high school each year.
* The 750,000 high school and college students who drop out each year, virtually all of them, without marketable skills.
* The unemployed, or soon to be unemployed, workers not expecting callback because of shifts in technology or shifts in labor market demand.
* The highly motivated working poor, stuck in low-skill, low-paying jobs, who need to hold two jobs to earn enough income to cover their family needs.
* The mothers of school age children who need and want to re-enter the labor market.
* The older workers involuntarily retired who want to continue to work, but need a marketable skill.
* The over 300,000 mental hospital patients discharged every year, most of whom need a marketable skill to sustain themselves.
* The over two million veterans returning to civilian life.
* The inmates in our prisons who need pre- and post-release skill training to cut down on the high rate of recidivism.

* The disadvantaged and handicapped.

Alvin Toffler, in his current book, Future Shock, dealing with the rapidity of change and what the future holds, has a chapter entitled "Education in the Future Tense." Two short paragraphs sum up our present situation in my view:

"The present curriculum and its division into air-tight compartments is not based on any well thought out conception of contemporary human needs. Still less is it based on any grasp of the future, any understanding of what skills Johnny will require to live in the hurricane's eye of change. It is based on inertia -- and a bloody clash of academic guilds, each bent on aggrandizing its budget, pay scales and status . . .

"This obsolete curriculum, furthermore, imposes standardization on the elementary and secondary schools. Youngsters are given little choice in determining what they wish to learn. Variations from school to school are minimal. The curriculum is nailed into place by the rigid entrance requirements of the colleges, which, in turn, reflect the vocational and social requirements of a vanishing society."

There may be some who say that Mr. Toffler is being unduly harsh, but let me point out that according to a recent study made by the Division of Guidance Service of the Colorado Department of Education, the projected "drop out" rate of students in the Denver Public Schools, grades 7 through 12, is 42.6%. Of the 57.4% who do complete high school, I understand that far fewer than one-half of the number complete four years of college. A generally stated figure is that only 15 to 20 students out of every 100 who start first grade receive a baccalaureate degree or higher. These statistics raise serious questions as to the thrust of our educational effort, particularly when over 2 ¢ of each real estate tax dollar in Denver County goes to the public schools. The same is true in your areas, I'm sure.

Our entire educational system was (and still is) geared to prepare students for baccalaureate degree study. This must change and is changing. It is not a matter of "if" - but "when" and "how."

Most of the situations and attitudes which have inhibited vocational education continue to exist but in a lesser degree. During the past five years, there is a tremendous momentum which has developed in support of vocational education, Commissioner Marland. This conference is obvious evidence. Dramatic evidence is provided by the formation and growth of the Community College of Denver. Let me talk briefly of this example.

The Community College of Denver was created by the General Assembly in 1967 which directed three campuses within the 5-county area of Denver, Jefferson, Adams, Arapahoe, and Boulder to be established, one in each year, beginning in 1968. As of this date, 7,500 students are enrolled on the three campuses. Of these, 60 per ce are engaged in studying for occupations which will give them job entry skills in industry, the professional world, and government. Characteristics of the college are:

1. An orientation toward vocational education in terms of percentage of hours offered and number of students participating -- but also an opportunity for academic transfer work.

2. Heavy emphasis upon teacher-student counselling.

3. Year-round education.

4. Open door policy.

5. Low cost, with tuition waver provided where needed.

6. Close cooperation federal and state manpower programs.

7. Work with industry and professions within the community - use of advisory committees on curriculum.

8. Flexible -- adapting quickly to needs.

What further must be done, within our new framework, so that we can provide the kind of manpower needed by changing technology; introduce the world of work and continuing education to students at all levels; and provide a means of education for the socially and economically disadvantaged?

The First Annual Report of the State Advisory Council for Vocational Education in Colorado stated four problems:

1. We must improve vocational guidance and counselling to aid youth to match their interests and capabilities with opportunities in the business world of work.

2. We must provide public information programs so that students, parents, and all other segments of the public can know about vocational education.

3. Traditional methods of motivating and instructing youth -- both disadvantaged and otherwise -- have not worked. Students leave school without sufficient education to obtain

or advance in a job. New methods of motivation and instruction must therefore be adopted.

4. We must improve our communications to policy-making bodies such as the General Assembly. To make this more effective, we must be clear, concise, and have measurable objectives and goals. We have a story to tell and we should tell it well.

Dr. Kenneth Hoyt, Professor of Education at the University of Maryland, and a former President of the American Personnel and Guidance Association, states that we must "integrate our system." He observes that we now have a "segregated" system which separates vocational education from academic education. He notes that too many educators have the following attitudes:

1. "There obviously is a need for vocational education classes, but I don't want my child enrolled in them."

2. "There is a place for vocational education, but it can't be as good as liberal arts education because it is different."

3. "Vocational educators belong in education, but they must be kept in subordinates roles in the power structure."

4. "The proper solution to the problem of vocational education is to build what we can contend are separate but equal facilities."

5. "We should build a few show places for vocational education so we can show them how tolerant we are."

6. "Vocational educators are lacking in cultural background, and that's why I don't associate with them."

How can we get rid of these misconceptions and speed our progress? First, we must look to the educators, who are the professionals, to be the innovators in changing the system. The other evening on an Educational T.V. talk show, I heard a professor from one college and the president of another agree that the educational establishment is vastly more conservative and resistant to change than business, where innovation must be the survival rule of the day.

Secondly, we can speed our progress if business, professions, labor, church and social workers support the great educational effort of our decade, to provide opportunities for both vocational and academic education within one educational system.

If then we are prepared to make a commitment to career education -- to an integrated system -- where can you, as educators, look for support? Speaking from industry's point of view, you will get plenty of support from us. I can give personal testimony to this because of my experience with the Community College of Denver. Their curricula are developed by close liaison between business, the professions and the community college, after preliminary investigation indicates a program is needed. Advisory committees are selected to help develop each program. Periodically, these committees evaluate the programs and make recommendations where changes were indicated -- and if evaluation reflects that the programs are not doing the job, they are altered or abolished. Typically, too many institutions of higher education have continued programs simply because they have always had them. It is just as important for a community college to be concerned with obsolescence, and the removal of non-relevant programs, as it is for them to be innovative and to inaugurate new ones.

And then another point of emphasis -- that of accountability through follow-up programs. These recognize that the responsibility of the institution does not stop when a student is employed in the world of business or industry. A follow-up program must be maintained for two purposes: First, to insure that the student is able to produce, and, second so that we can learn from his experience whether we are on the right track. These things can only be determined by checking with the owner, student, personnel officer, shop foreman, or head mechanic. Here, again, you will find not only cooperation but wholehearted support from business and industry.

There are those who will say that the advocates of occupational education are restricting students from receiving a "real" college education. In answer to this, we must define what we mean by education. I saw a quotation the other day which impressed me, from Dr. Stanley P. Wagner, President of East Central State College, Ada, Oklahoma:

"There are four enduring areas of education:

> (1) The area of respect for others, (2) The area of skill and knowledge of self-discipline, (3) The understanding and appreciation of the natural world, and (4) The learning of a vocation."

If we can measure our product against these criteria, we will have performed our job well.

CAREER GUIDANCE SERVICES
FOR
OCCUPATIONAL STUDENTS

By Dr. J. Quentin Jones,
Assistant Director
College Entrance Examination Board

Until recently, a majority of people in the United States believed education was the road to self-esteem and self-fulfillment. Today it would appear that the ability to get a job, to hold that job, and to make ends meet has reached an equal status in the mind of the public. It is in that setting, then, that the community and junior colleges come to the center of the stage.

What are the goals and attributes of students served by the junior and community colleges? In general, I believe it fair to say that the motivation of students served by two-year institutions is primarily vocational; they prefer variety in courses and activities, and research has shown that many of them respond best to structured small group counseling.

Who are these students? Many are minority students making their way into the predominately White and middle-class institutions. Others are women moving into and through a predominately male arena. A third group are the adults who are a growing minority on predominately youthful campuses. A fourth group are the low achievers approaching tasks designed for the more academically able. And all of these groups are entering a system and a climate largely dominated by essentially liberal faculty.

It would be a mistake to talk about the student body or the entering class as an entity. It is not one homogeneous collection of persons. There are many student bodies and sub-groups of those student bodies, and to be able to serve such groups, the need for information about each one is critical.

To illustrate, the Atlanta Area Technical School, one of a network of postsecondary area vocational-technical schools which covers Georgia, serves primarily Atlanta and Fulton counties. Its enrollment in the fall of 1971 was 6,000 students. About 1600 were full time; the remainder were part-time and evening students. Thirty-three per cent of that group had been out of high school for one or more years. Forty-three per cent were White; forty-four per cent were Black; eighty-four per cent planned to work part or full-time while attending Atlanta Area Technical School; sixty per cent requested help in finding a job; and thirty-three per cent had an annual parental income below $6000.

At AATS students may choose from more than 46 curriculum areas which include courses from two or three weeks' duration to two years'

in length. Admission is granted on a first-come, first-served, open door basis.

S. D. Bishop State Junior College in Mobile, Alabama, is located in one of Alabama's largest Black ghettos and serves a student body which is 90 per cent academically and financially disadvantaged. In the fall of 1971 the student population at Bishop State Junior College numbered 915. Ninety-nine per cent of that group were Black; fifty-two per cent had a family income below $6000; eighty-five per cent of the students planned to follow college parallel courses; and ninety-one per cent of the beginning freshmen were enrolled in pre-college or remedial courses.

Obviously, the key to helping students such as those found in Atlanta, Georgia, or in Mobile, Alabama, or anywhere else, for that matter, is a highly personal approach which provides each student with individual attention to all phases of his campus life.

It is important to know, not only such students' past academic achievement, but also as much as possible about his aptitudes, his interests, his goals, his motivation, his family background, his financial status, his adaptability to a new environment, his past experience, his influences, his fears, his hopes and his desires.

Clearly, such a task falls initially to the counselor, typically the first person entering students encounter in the community or junior college. High school records and recommendations are available, of course, but it is evident that additional information is needed to make up a comprehensive student profile.

After experimenting with a variety of instruments, the institutions in Atlanta and Mobile decided that the Comparative Guidance and Placement Program, provided by the College Entrance Examination Board, was the one instrument which most nearly fitted the needs of both the students and the college.

The fact that in CGP the student receives comprehensive information about himself, perhaps for the first time in his educational career, was an important factor in the decision.

While no single instrument provides all of the answers to all of the questions and neither AATS nor Bishop State rely solely on the data generated by the program, CGP did appear to come closest to satisfying the requirement for a comprehensive and reliable information system which could be shared between the student and the counselor as they together worked toward making more realistic educational decisions.

At S. D. Bishop, CGP is used in two ways--for placement purposes and as an instrument by which a student can look at himself. At

Atlanta Area Technical School, CGP provided the capability of being administered in alternative ways and offered the flexibility desired by the counseling staff in terms of both scoring and score reporting.

Since many students at Atlanta Area Technical School--and perhaps your own community college--have been out of secondary school for one or more years, administration of the Comparative Guidance and Placement Program could not be relegated solely to one or more high school administrations. On the other hand, many new students enter college directly from high school, and for them it would be helpful if they could take the battery there. Both options are possible with CGP.

Before the student takes the battery, he is given a booklet telling him what CGP is like. At the time he is given his test results, using the Student Report, he receives a second booklet which helps him to interpret his scores with the assistance and guidance of his counselor.

The CGP battery is composed of two questionnaires and seven short exercises. The former are the "Biographical Inventory" and the "Comparative Interest Index," which can be completed by the student on his own time. The seven exercises include three measures of assessment in reading, vocabulary, and sentences, and one in mathematics.

The remaining three instruments, in my judgment, hold out the most promise for future development because these are three, nonverbal examinations. The "Year 2000" is essentially an exercise in following directions and reading ability. "Mosiac Comparisons" challenge the student with a series of visual exercises and his ability to interpret abstract forms. In "Letter Groups" the student is asked to demonstrate his organizational ability and to see relationships.

Perhaps these three instruments can do more toward providing programs of study and curriculums which fit people, rather than the traditional method of fitting people to pre-existing programs, than any other segment of the program.

Through its instruments, exercises and various reports, CGP can meet the several requirements for the information needed by student personnel specialists. It provides a statement of the student's educational and vocational interests; it provides a valid description of the broad range of the student's abilities as they relate to different curricular options; it provides a valid comparison of the student's abilities with those of other students in the same institution (in other words, local normative data is available in addition to national normative information); it provides an analysis of the student's financial needs in terms of the specific costs for a given institution; and, finally, it provides a description

of the student's special requirements such as the need to improve study skills, the need for part-time or full-time work, or the need for reading improvement. All of this, plus flexibility in administration and reporting, has been found to be particularly important to the Atlanta Area Technical School, to S. D. Bishop State Junior College, and to more than 150 other community and junior colleges across the country.

The cost for the total CGP battery currently is $3.75, and in the 1972-73 academic year, the fee will rise to $4.50. You should know, however, that there is a fee waiver provision for students in the low income brackets.

In summary, then, CGP is a comprehensive information system, composed of questionnaires, exercises, and services designed to meet the unique guidance and placement needs of students entering two-year colleges and vocational-technical institutes. CGP has helped institutions to guide and place students in appropriate courses in English and mathematics, to identify students who would benefit from remedial programs and courses, to guide and place students in appropriate pre-baccalaureatte curriculums, to identify students who will need financial assistance, to determine the total financial aid requirements of an institution for the purpose of seeking outside financial support, and to learn more about students seeking and entering various programs for the purpose of evaluating and even changing academic and administrative programs of study.

CGP helps the student to learn more about himself--his interests, his abilities, his attitudes, his aspirations; to make wiser decisions about the courses of study and the careers he wishes to pursue; to critically evaluate and compare his career goals in terms of his interests, abilities, and aptitudes; to inform the institution of his degree of financial need; and to alert the institution to his need for other kinds of help.

Student reports contain the results of the performance of each student on all of the exercises and questionnaires, including scaled test scores and for the placement instruments, national and local percentile ranks; a comparative interest index profile; student reported secondary school grades; a personal assistance guide; performance and placement forecasts by program; and the financial need indicator. Three copies of the Student Reports are provided, one for the student and two for the institution.

In addition to summary reports about individual institutions and their students, a number of other studies and services are available. There is the validity study by which an institution can examine the predictive effectiveness of the battery on its own campus. There is a student questionnaire, which allows an institution to assess the extent of a student's satisfaction with his major field

of study, his placement in English and mathematics courses, his experience with the faculty, his reaction to CGP, etc.

Currently under development are long term follow-up surveys which will give an institution the reaction and the evaluation of students after they have left the college or their vocational technical institute and of the employers of the students.

CGP became available in the spring of 1969 after two years of extensive experimentation and research at more than 100 community and junior colleges across the country.

Finally, CGP can assist the counselor in developing his role as a consumer or educational facilitator on the campus, providing the information and the data needed to match educational experiences and campus options with the students' personal needs. Community college counselors need not necessarily be researchers, but they do need comprehensive information about all of their students and about subgroups within that total student body. But most important of all, they need to apply the information and the research data which can be provided through CGP. The College Board is prepared to help community college counselors interpret that research data and to implement the findings on their campuses as a service to each of their students.

MOLDING CURRICULUM TO STUDENT NEEDS

By F. Dean Lillie, Associate Director
Colorado State Board for Community Colleges and Occupational Education

Joseph P. Cosand, in the book entitled Campus 1980, projects a philosophy for the comprehensive community college in 1980 as follows:

> The community college is concerned with the educational needs of the community or region it serves. It accepts its responsibility for leadership and proposes to develop and maintain a collegiate program sufficiently flexible to adjust to changing educational needs. To fulfill these needs it will offer academic, technical, vocational, remedial and general cultural courses all directed toward the betterment of the student, and thus the community.

I submit that this is already the philosophy of the comprehensive community college which will be amplified during this decade as we strive to continue to meet the complete educational needs of the communities, regions and states which we serve.

In undertaking such an assignment it is clear that the community colleges' role is extensive when we attempt to embrace the concept of extending educational opportunity to all. This extension of educational opportunity is accomplished through accessibility to the institutions (geographic, financial, psychological, social and educational), through out-reach activities to students who may not have previously been able to attend college, and through the open-door admissions policy which provides an institution that is open to all who can benefit from the programs and services offered.

Obviously, to fulfill these assignments, public two-year colleges must, of necessity, have a variety of programs and services available so that all needs of existing and potential students can be met. These programs and services are available in the occupational, vocational-technical courses and programs which are a major thrust and mission of these institutions. This particular thrust recognizes the fact that 80 per cent of the jobs in today's society require less than a baccalaureate degree so we believe the community junior college is filling an existing void. In fact, it is my belief that this is one of the major areas on which we in community college education can hang our hats. We are doing the job, and have the commitment. Additional programs and services of the community colleges are evidenced in college parallel or transfer programs of the institution, in the short-term courses and programs available to students, community service activities of the colleges, preparatory, skill building, and developmental options available to students, (such options recognize the difference in levels of preparation of students who enter the two-year colleges) and comprehensive

counseling, testing and guidance programs designed to fit the student's ambitions, needs and background into a proper vocational-career or educational goal. Finally, two-year colleges attempt to keep tuition and fees at the lowest possible level so financial barriers are removed or diminished.

Within this setting then, what must be our focus? In my judgment, it must realistically and honestly be on the student and fulfilling his needs through broad curricular offerings with a special focus on preparing students for a job or a career. Another important component has to be non-instructional or instructional related services generally represented through a variety of student personnel services. Thus, the student emerges, his needs, curricular programs and related student personnel services.

Patricia Cross, in her recent book entitled Beyond the Open Door, deals with the so-called "new students." New students are defined in her study as those scoring in the lowest third on tests of academic aptitude, whereas traditional students are those in the top third--the group that has traditionally been considered "college material." Cross' observations and research data are therefore particularly relevant to this conference and really to our general task. Data presented by Cross verify the "widely held belief that new students view education in pragmatic terms. Although all students, traditional as well as new students, believe that the most important functions of education lie in the general area of occupational preparation, new students seem especially eager to get at the business of earning a good living. Upon entrance to college, new students are more likely to have made a career commitment and they plan to concentrate on learning things that will be useful to them in their jobs: they aspire to jobs of working with people or things--as opposed to working with ideas or abstractions. They want generally to have more of the good things of life than their parents have had, and their career preferences are solidly realistic with respect to educational requirements. Indeed, one might observe that perhaps they are too much influenced by reality."

With "new students," "emerging students," "new clientele" on our campuses, with the various deficiencies and job directed motivations they have, curricular offerings must be examined and reexamined to be certain we are serving the population. Implications for curriculum and instructional personnel are certainly evident. For example:

1. The community college curriculum should include provisions for developing special programs for disadvantaged students based upon their special needs.

2. Community college curriculum planners should place special emphasis upon developing teaching strategies as well as programs and courses to fit the needs of a diverse student

population -- Occupational, Short-term, Transfer, Certificate Developmental and others.

3. Teaching strategies should take into consideration the need for developing positive feelings toward self and the environment including the school environment as well as job, family, and the societal environment.

Stated in other ways, it can be said that the two-year college is already more deeply involved in instruction than any other segment of higher education and it could or should consciously study its instructional processes and products. Along these lines and recognizing the diverse needs of community college students, Arthur Cohen and Florence Brawer, last winter, posed several questions community colleges might ask themselves:

> Exactly what is being learned here? By whom? Are curricular and instructional practices as effective as they might be? For whom? And if not, why not? What forms of student achievement should be accepted as evidence that learning has occurred? If students were provided with sets of specific objectives upon entrance to the college, would their learning be enhanced? Would dropout rates be reduced? What else could be done to facilitate the process and guarantee the product? How can particular types of instructors be prepared to bring about learning? What patterns of instructional supervision yield the best results? What qualifies a person to be a good teacher? Can everyone teach all types of learning objectives with equal facility? Are some instructors better at aiding recall, others at stimulating students to continue learning on their own? Are such attainments the result of discernible actions or of basic personality characteristics that lend themselves only to indirect measurement?

Good questions which today require answers. We need to know.

What about student personnel services, then, where do they fit in this scheme of notions? In my opinion, student personnel services staff stand clearly in the middle of this important endeavor called community college education and the extension of educational opportunity to all. These are the individuals who are responsible for recruitment, admissions, including provisions for open enrollment, testing, counseling (has to be most important--occupational, vocational careers), advisement, appraisal, health, financial aid, job placement, consultation and a host of other functions and services.

Student personnel staff and their role has been debated, studied, restudied, criticized, praised, eliminated, modified, and even expanded. However, student personnel services have prevailed and have had a tremendous impact on what goes on in community colleges, even with

the adversity noted. Lest I lead you astray, do not misunderstand my thoughts on this topic. Student personnel services are in trouble, but, in most cases, are rising to the occasion and attempting to be responsible and involved. If they do not continue to prevail, something else will replace their role. Student personnel services should continue to stand in the middle by coordinating and facilitating the educational endeavor of the institution and the diverse needs of students.

Several student personnel models have existed and unhappily continue to exist today. They have been described by Terry O'Banion, Alice Thurston and others as:

1. Regulator or repressor model--Early 1900's the President's "no-man", Keep the lid on and Students under control

2. Maintenance or service man model--Series of services for students who seek them, but with no program

3. Pseudo-psychotherapist model--Provide therapy for a few sick kids--(couch all he needs)

4. An emerging model--student development model, commitment to the fuller development of human potential

The emerging model may provide the sense of direction student personnel currently requires. O'Banion last winter discussed further the student development model and the changes occurring in student personnel work. He suggests and I deeply hope that:

> Student personnel work is no longer rehabilitative, tending the lame, halt, and blind--student personnel work is facilitative, turning on the bored, bright and beautiful. We have moved from a rehabilitative function, the old medical model that many of us were involved in, to a new model of facilitating student development. The emphasis has changed from psychoanalytic and behavioristic theory to existential and humanistic theory. In loco parentis loses power and personal freedom is desired by all.

As a final phase of my comments, I would like to summarize a real, operational, successful program of the type I have been describing today. This is an instructural laboratory technique employed by the Community College of Denver which recognizes the diverse needs of students, curricular challenges and the role of student personnel services. Last winter Dr. Luchsinger prepared a paper on this topic to help garner special funding for this effort at the Community College of Denver. To explain the concept and how it works, I will quote from salient parts of Dr. Luchsinger's paper.

Such an approach represents the real world and where it's at in molding curriculum to student needs.

"The 'instructional laboratory' concept is one of the most challenging educational innovations in the field of higher education today. This new concept fills a gap existing in the traditional higher education system.

"The system of instructural laboratories effectively reaches disadvantaged students who, otherwise, would never have received the occupational training necessary for job entry or who might have become welfare recipients for many years to come. To many students, the instructional laboratories offer the only educational opportunity available today.

"One of the unique characteristics of Community College of Denver, and I might add, many community colleges, is the heterogeneity of its students. The college very frequently finds it necessary to provide special instruction for those adult students who do not have the basic skills of learning. They may either have left school some time ago or may never have completed junior or senior high school and now see the need of further education. Even students with high school diplomas are sometimes found to be functionally illiterate.

"The instructional laboratory is an independent facility, both administratively and functionally, within the total organization.

"The system of instructional laboratories provides two basic functions - vestibule laboratory and developmental laboratory functions."

Vestibule Laboratory Function:

"The vestibule instructional laboratory serves as an entry point into the college community for marginal and sub-marginal students, dropouts of all ages, functional illiterates, and older students who are returning to school after some years of being away and who therefore are unsure of their skills and their ability to perform as effectively as younger students. The services of the vestibule laboratory are also available, however, to any student enrolled in the college who feels a need, or has been referred to the lab, to brush up on basic skills in the areas of reading, writing, spelling and mathematics. The programs are offered on a non-credit basis.

"Activities of a vestibule laboratory are analytical, diagnostic, remedial, prescriptive and highly individualized in nature, treating each student as a separate entity, with a learning content compatible to his needs.

"The vestibule laboratories have special appeal to high school dropouts and functional illiterates, who can find nothing in the traditional college curriculum to remedy their problem. Because he is an adult, the student feels more comfortable in a college environment with other students of his own age. He also tends to gain in self-respect because of being enrolled in a college program with others who have similar educational, social and economic backgrounds.

"Basic education for adults and the General Education Diploma (GED) Program are included in the category of vestibule lab functions."

Developmental Laboratory Function

"The term 'developmental,' as a concept, is better applied to those students who have progressed beyond the vestibule laboratory or those who have resolved their entry academic difficulties and are pursuing a curricular course. Therefore, the developmental laboratory is one which provides a uniquely tailored learning facility for students desirous of enriching themselves in various subject matter areas or those needing course and discipline related development and remediation. The developmental concept, therefore, need not imply remediation - it implies continued growth in the subject.

"Community College of Denver's developmental laboratories at the present time provide instructional services in the subject matter fields of communications, mathematics, social science, general science and A-V Learning Materials Center (LMC) Lab.

"Both the vestibule laboratories and the developmental laboratories have the following common characteristics:

1. The instruction is so highly individualized, self-paced, non-punitively graded, non-competitive and student-centered that it is entirely different from any traditional method of higher education.

2. The providing of lab services tend to increase the retention rate of students.

3. It has been demonstrated that the instructional laboratories are educationally efficient and effective.

4. The lab programs are fiscally accountable.

"Program objectives of the instructural laboratories are:

1. To provide adult students with an opportunity to learn the basic skills - spelling, writing, reading and arithmetic.

2. To provide adult students with an opportunity to complete General Education Diploma (GED) requirements.

3. To provide adult students with an opportunity for entrance into occupational or transfer programs.

4. To complement, rather than supplement, the regular classroom instruction."

Instructional laboratories do indeed fill an existing gap. Movement in such directions is necessary and required.

In conclusion, it appears clear that many challenges still lie before us. Among the challenges are beliefs that all men are educable, that educational opportunities should be relevant to a wider range of human talents and abilities than those traditionally valued in higher education, that students with unsuccessful educational histories do achieve when given renewed opportunities to find themselves and to try new options, and finally, that the public two-year colleges of this country should continue to build their programs to serve the educational and career needs of the communities and students which they serve.

The challenges are great, but the outcomes are equally great. Good luck.

THE CORE CURRICULUM

By Dr. Leland Luchsinger, President
Community College of Denver
Denver, Colorado

Educators are being placed in a very precarious position. We advocate that education beyond high school should be universal. Postsecondary opportunity should be provided to everyone--those who have not had the opportunity and those who, for some reason, could not or did not take advantage of postsecondary opportunities.

Advocating postsecondary opportunity for all places educators in the dilemma of providing transfer programs (using four years to convince an individual that he can be as unemployable as he was upon completion of high school), or of providing occupational programs (vocational-technical) which have adequate drawing power to justify their existence.

How can we provide ample opportunities in occupational education to avoid all women becoming secretaries and all men auto mechanics? This is especially true in the community colleges enrolling 2,000 or fewer students, which is most of the community colleges. How can we avoid the great numbers and proliferation of courses in any community college -- large or small enrollment?

One solution to the problem may be a core curriculum or core courses in general education and in basic skill courses. One caution I would observe is -- Do not require everyone to take a common core in general education because it is good for them. Castor oil is good for us also. We advocate individualism in learning -- we learn at our own rate -- the curriculum should be tailored for the individual. On the other hand, you will hear me suggesting core, some general education courses and/or basic skill courses. I am suggesting alternatives to you as a means of stimulating discussion. The pendulum swings -- I am not advocating one extreme or the other. The mutual relationship among some occupations (families or clusters of occupations) may make it possible to develop common elementary courses for a group of programs and/or courses with varying levels of proficiency. If a common core of courses was developed for LPN nursing, AD nursing, inhalation therapy, radiological technology, dental assistant, and other health occupations, students could benefit through greater flexibility and colleges could conserve their limited resources. For example, a community college in a city of 10,000 population may offer programs in the aforementioned occupations through coring some general education courses (communications, ethnic studies, psychology of human development or human relations in business and industry) and providing a common core in basic science developed for the various health occupations (anatomy from the shoulders up for dental assistant; anatomy of the body for the nurse), plus a course in ethics

and/or patient relationships to be followed by a well-planned and well-supervised work experience, OJT or Co-op program could fulfill the manpower needs of this community and retain individuals in needed positions in the community rather than provide educational opportunities for 20 nurses who, upon completion, could not find employment in their community -- or who would have to move to the urban areas of the state or to other states. As educators, we must investigate, study and experiment with all alternatives. Core curriculum is an approach which might save time and money.

The core curriculum may provide the opportunity to try other approaches which will enhance instruction and conserve limited financial resources. Where is the magic in a class size of thirty? Is the acquisition of knowledge diminished as the number of learners increases? Is the impact of an idea learned in inverse ratio to the size of the class? Common sense as well as recent research answer "no" to these questions. Therefore, we may core certain general education courses in behavioral objectives, such as the development of attitudes pertaining to the world of work, through large classes taught by the master teacher who has all the aids needed to make the subject matter relevant. These are to be followed by small seminars with free flowing reaction and discussion. If this approach is followed, we cannot take the same old disciplines and teach them the same way as they were previously taught and just enlarge the section by increasing the number of students enrolled. If we are going to help the student acquire attitudes which aid him in transition into the world of work, we cannot force him to take the same textbook course in general psychology that is good for everyone. The content and methodology must be adapted to the situation and to the clientele. The same procedure can apply to a cluster of occupations in electronics technology. The basic core may be an international fundamental theory course to be followed by laboratory experience where the instructor engages in some tutorial activities, helping individual students. Where the section is large, there should be a master teacher and aides.

The core curriculum will lend itself more readily to associate degree programs rather than certificate (of completion or achievement) programs. Time or exposure to the skills, knowledge and attitudes to be developed, and the acquisition of knowledge and the attainment of skills, at this level of sophistication, are the major objectives of the course. It may take two years for him to decide upon his occupational goal.

Core curriculum is not a "cure-all." But it may provide a means to change traditional approaches, may enable us to use an instructor's time more effectively, and permit the instructor more flexible use of methodology. But above all, it gives the student more opportunity to explore before making his final choice of occupations.

THE LADDER APPROACH

By Robert Eicher, Director
Career Education Division
Des Moines Area Community College
Ankeny, Iowa

For a long time many of us have discussed the possibilities of career ladder, career lattice, vertical and horizontal mobility, and program articulation. Recently, this terminology has been finding a place in many of our educational journals and conferences and we are beginning to agree what the terminology means.

For purposes of this discussion, we are going to define the career ladder as a concept that consists of processes and structures which facilitate (not merely permit) advancement to progressively higher levels of practice on the basis of learning attainment. The key word in the definition is the verb "facilitate" which connotes due consideration of time and the elimination of repetition that is not meaningful. I think most all of us have come to the conclusion that an individual should progress to a higher level of practice because through some sort of an educational program and experience he has gained knowledge and enhanced intellectual abilities and manipulative skills; he has become more productive.

Another term often used in conjunction with career ladder is career lattice. In this instance, we have reference to horizontal mobility, rather than the vertical mobility which is the concept of the career ladder. The concept that a person might progress vertically by first moving horizontally is an important one.

To illustrate the career ladder approach, we can use nursing as an example. We use nursing because it is a discipline with the greatest number of levels and the most clearly defined levels. In this instance, a student could move from a nurse aid to a practical nurse to a diploma or associate degree nurse and finally to a baccalaurette program.

Using this approach for education, programs at all levels would allow for a great deal more flexibility than presently exists. Each program, beyond the lowest level, could provide open entrance to those prepared at lower levels, and each could provide easy and open exits for those not choosing to continue beyond designated points in the career hierarchy.

An advantage of this approach is the early experience a student has with his specialty area and an opportunity to relate later, more advanced, basic science and general education experiences to something real.

The factors involved in career mobility are as follows:

1. A job description and a thorough job analysis must be done for the specific job level in each program.

2. Educational programs must be designed with statements of objectives and evaluation of role, functions, and duties to match the prepared job descriptions and analysis.

3. There must be developed challenge tests to measure equivalency.

4. Barriers between and among associations and agencies must be broken down if career mobility is to become a reality.

NOTES ON MULTIPLE OPTIONS

By Dr. Chester Gausman, President
Central Nebraska Technical College
Hastings, Nebraska

1. At Central Nebraska we have: enrollment any day - great for Veterans, the unemployed, housewives, farmers and part-time workers.

2. Completion any day: Job opportunities occur the year round, after all, and the student should determine when he leaves to take a job.

3. Drop in and out provisions: The student can resume course-work at his point of departure at any time, without any loss of credit or time.

4. The rates of learning vary with aptitudes, industriousness, previous experience, previous education, handicaps, and motivation. Drop out rates are cut by these approaches.

Multiple options: Why? Because needs vary by:

(1) Length of program; (2) level of program (highly technical -- or low level vocational); and (3) wide variety of vocational choices is needed, even within a program. Take Basic Electronics, for example -- here are some of the options: T.V./Radio Repairs; communication - FCC; appliance repairs; industrial electronics; computer servicing; business management; and, sales.

These are some optional objectives: the time required to achieve them, and the number choosing them at own college: Certificate -- (1) month to 2 years -- 40 per cent; (2) One-year diploma -- 20 per cent; (3) Two-year -- 15 per cent; (4) Associate of Science Degree -- 5 per cent; (5) Associate of Applied Science Degree -- 20 per cent; and (6) Associate of Arts (possible -- based upon credit earned, not time spent).

LAW ENFORCEMENT vs PUBLIC RELATIONS

By James May
Palmer College
Charleston, South Carolina

My approach to the discussion of law enforcement vs public relations is the image of the true police officer and his sincere desire to help his fellowman, to aid in solving the problems of current society, and his desire to better himself educationally in order that he might serve his community better.

We, at Palmer College, have been in the field of criminal justice education since 1966 and we have the degree program in the area of police administration and correctional administration in the state of South Carolina. We feel we are serving the needs of our state and the community with our program.

Today I would like to present to you the curriculum we have developed at Palmer College and explain how we have approached the Criminal Justice Program. First, we are an open door college that serves the public needs both of the in-service police officer and those who are interested in the field of criminal justice. We feel that we have refined a program which will provide the proper educational background for our graduates. A noted educator in the field of criminal justice made a differentiation between education and training with one of the best analogies:

Education for a police officer is - when to pull the trigger.

Training for a police officer is - how to pull the trigger.

The philosophy behind his thoughts is that we, in the field of education, are concerned with a well rounded educational program for the individual. We have modeled our program along the lines of a well developed educational program and leave the training to the state training agencies and local hiring department. This practice has indicated to us that our graduates are performing much better with an overall educational background than if we offered specialized courses at the college level in such courses as patrol procedures, how to handcuff a person, etc. More and more institutions are moving away from the belief that they must teach all of the skill subjects for a criminal justice candidate. The move is to concentrate on subjects dealing with psychology, sociology, human services and education in the urban setting. Let's face it, the most important thing we are faced with in educating criminal justice personnel, and particularly police officers, is public relations -- how to handle people.

Let me present you with the current curriculum that we are using at Palmer College in the area of police administration and

correctional administration. I will approach the Police Administration major first, and in our program, there is basically little difference in the curriculum of the two majors . . . The four basic courses that we require are: introduction to criminal justice, criminology, criminal law and police administration and organization . . . general psychology, principles of sociology, american national government and state and local government are the same for both police and correctional programs . . . We require English composition I and II for both majors. I am sure you are much more aware than I that this does constitute somewhat of a problem for some students, particularly the older Black student who is a police officer and equally as well for the older White police officer with a limited educational background. We are faced with numerous problems attempting to complete this requirement. One solution has been to permit these students to take a course in remedial English, and if necessary, to enroll them in usage and grammar, which is included as one of the English electives.

Emphasis is placed on taking college mathematics; however, we permit those who may terminate with a two-year degree to take business mathematics in place of college mathematics.

We have required one course in basic typing which we feel a criminal justice supervisor will need because of the amount of paper work that is required in report writing, documenting cases, etc. We have 19½ hours of electives for both programs.

A course in economics is a successful recommendation. Let me point out to you that we have only devoted 27 hours of hard core criminal justice subjects to a curriculum of 99 hours. An example of de-emphasis is that the University of Oklahoma requires 18 semester hours out of 124 of specialized courses toward a four-year degree.

Before I stop for questions, let me provide you with information on our bootstrap program in which we offer up to 9 hours of credit to former enlisted men of the military for constructive credit, and 13½ hours to former commissioned officers. This credit is approved by the academic dean of instruction based on valid records and proof of benefit of education to the individual. Other credit may be awarded for specialized courses, but no more than 45 quarter hours may be granted. As many of you know, this procedure is used widely by some four-year institutions. An example is the University of Nebraska at Omaha.

THE HUMAN SERVICES ASSOCIATE PROGRAM

By Brad Reynolds
Central Piedmont Community College
Charlotte, North Carolina

This program was designed to prepare students for employment as para-professionals in a wide range of services, agencies and organizations. An analysis of the various jobs that will be available to the graduates revealed that certain skills such as observing and recording behavior, interviewing, listening and leading group discussions are important in all areas of human service work. The basic human service aids courses are designed to help the student develop these skills while obtaining practical experience in a laboratory situation. The student must also have a general knowledge of all agencies and institutions involved in human service work and be aware of the particular service each renders and how service can be obtained.

Through general courses in the field of psychology and sociology, the student acquires general knowledge in the area of the learning processes and the general organizations of our society. Particular skill courses such as communications, typewriting and music are recommended as general education components to the total program.

Individual field experience arranged for each student is the key factor in the flexibility of this program. The use of this arrangement allows one human service class to train students to function in a variety of human services. One class may have students training to be education aides, mental health aides, social service aides, shelter workshop aides and rehabilitation aides. Students in each of these categories would be encouraged to select general coursework (outside the human service curriculum) that would be beneficial in the field of human service he was pursuing. His individual laboratory experiences would be arranged in the agency of his choosing thus enabling the student to gain practical experience while experimenting with techniques and theories learned in the classroom. The human service core courses are designed so that students can share their field experiences in weekly seminars. This plan allows each student to develop skills in self expression while learning about other fields of human service.

Need

The need for nonprofessionals in the human service field has been on the rise for the past five years. Professionals are constantly being flooded with additional duties that could be done by trained nonprofessionals. New health facilities are being constructed but these services are impaired due to the lack of trained personnel to carry out the work. In the past five years, thirty-five community workshops for the handicapped have developed in North Carolina. These facilities are run almost entirely by nonprofessionals

and they are constantly looking for trained personnel to fill vacant positions.

The North Carolina Department of Juvenile Corrections has changed its philosophy drastically in the past few years. Emphasis is being placed on counseling and training instead of just institutionalization. This brings the demand for trained para-professionals to do the job.

The demand for para-professionals in the field of education is on the rise. As teachers demand smaller class loads, more teacher aides will be needed. Para-professionals are now being used as school social workers, and there are thirty such openings in the Charlotte area at the present time.

The North Carolina Division of Vocational Rehabilitation has budget positions open for case work and rehabilitation aides but few applicants as a two-year degree in human services or the equivalent is required. In the next few years, each of the 400 counselors in the state will have aides. The need is so critical that the State Department is attempting to construct its own training program for case work aides.

The North Carolina State Department of Social Services has recently developed para-professional positions in the area of homemaking and social services. Once again, there is the problem of training personnel to fill these positions.

The expanding emphasis on mental health out-patient centers has created a need for trained mental health aides. These budget positions have already been established by the State Department of Mental Health but again there is the problem of finding trained personnel to fill the positions.

The recent development of speech and hearing centers, centers for human development, juvenile correction facilities and day care centers for the physically handicapped and mentally retarded has also increased the demand for trained human service workers.

The need for trained nonprofessionals in human services has just begun. As more facilities are constructed, the need for trained personnel will increase. It is paramount that training programs be established to meet these demands.

Future Plans

After carefully considering all variables involved, it is evident that a tightly structured sequence of required courses will not adequately serve the human service associate students. These students come from a wide variety of educational and cultural backgrounds and, at the present time, they are all required to engage

themselves in the same educational experiences. This system causes frustration to the student who has not had a variety of cultural and educational experience and boredom to the more fortunate. Frustration and boredom are not positive attributes to any program where an attempt is being made to foster positive attitudes concerning people. The only possible solution to this problem should be a program developed around the concept of behavioral objectives. This process will allow the student who already possesses certain skills to move rapidly forward in the program without being detained due to course structure. At the same time, the student who lacks these skills can learn at his own rate without the frustration of being involved in course hours that are beyond his comprehension. This type of program would allow one basic curriculum to serve the educational needs in a multitude of human service areas.

COMMUNICATIONS FOR CAREER STUDENTS

By Doris Weddington
Central Piedmont Community College
Charlotte, North Carolina

The Communications Laboratory at Central Piedmont Community College was established in the fall of 1969 and, as its initial project, was charged with the task of offering communications skills to the students in the eight one-year programs. The laboratory program has been designed to meet the needs of the comparatively low verbal student but with the capacity to upgrade the skills of all entering trade students, including those with average or advanced achievement in communications.

The Communications Program is designed so that each student may begin at his own level of achievement in speaking, listening, writing, and reading skills and may be tutored through a sequence of learning experiences tailored specifically to his individual needs towards stated objectives. Each assignment is designed by the instructor to upgrade the skills of the individual student in his own personal areas of weakness, moving him forward at his own best learning rate.

Relevance to the student's chosen trade or paraprofessional area is gained through the choice of content in oral communications projects, through assignments of topics in written work, through the furnishing and assigning of trade journals in each student's trade area, and through the study of trade-related vocabulary furnished by the faculty in the student's major.

Stated behavioral objectives have been established through conferences which have included members of the English faculty, instructors in the trade programs, and the students themselves. These objectives are in keeping with needs in on-the-job communications plus skills needed for citizenship functions and personal relationships. The minimum required standard of achievement is in every case clearly stated for the instructor and the student alike.

Each student is given a set of assignment sheets which indicate the major objectives he must accomplish. Within the first four days of the course, a student may pass off the entire course or qualify to skip large portions of the projected work if pretesting reveals that he is already proficient enough in communications skills to meet certain stated optimum objectives. These optimum objectives which qualify for exemption are not the same as the minimum objectives required for credit.

Whenever the student undertakes any segment of the course requirement, he knows what he is expected to do, why it is of value to him, and by what criteria his performance will be evaluated.

He knows that he must meet minimum standards on one objective before he attempts the next one in the sequence. Some students may attempt a given objective after simple instructions and statements of the criteria for success; others require varying amounts and differing types of preparatory work before attempting the same objective.

If the student fails to meet minimum requirements the first time he attempts to demonstrate mastery of an objective, he receives additional preparatory work attacking his specific problem and then attempts the assignment again. He is not penalized for his previous unsuccessful effort. Therefore, the grade finally assigned for each objective is never less than a C, and every student who is willing to spend the necessary time and effort will eventually receive credit for the course. Many complete in less than a quarter; others require more time; but there is no failing and no "starting over."

There are four main course segments to be completed by each student: oral communications, writing, reading and trade related vocabulary. Training in listening skills is built into every phase of the course work, but listening is not taught as a distant course segment. Oral communications projects include planned experiences in human potential group work, discussion groups, and oral reporting of trade related information. Criteria for success are clearly stated so that the student knows what qualities to strive for in order to meet the requirements.

One of the objectives in oral communications is that "the student will be able to demonstrate some procedure, equipment, or mechanism related to his trade in such a way that the instructor and some of his classmates who are unfamiliar with the function will be able to understand,at least on a surface level, that which he has explained." The student has unlimited opportunity to meet these or to raise his grade by improving his performance.

As a part of the oral communications program,idiom, grammar, and distinctness of speech are improved through the use of pattern practice tapes. The student is able to listen to the desired standard speech patterns, repeat what he has heard and then listen back immediately to the pattern and his own response for direct comparison. These same tapes are regularly assigned to correct specific non-standard patterns which occur in the student's writing.

Writing skills are taught through the use of dictating units which enable the instructor to tutor simultaneously up to twenty-two writing students per section. Each student has a dictating unit, a folder and a belt for his own use. He may dictate his thoughts first and then transcribe, or he may begin by writing. Then he will read what he has written into his dictating unit and listen back critically as an aid to revising. In this way, everything the student does goes through the cycle of speaking, listening, writing and reading before the assignment is completed.

When the student has made his final revisions, he submits his paper to his instructor in a special folder along with his dictating belt. The instructor may listen to any parts of the student's reading that may seem of value in understanding his needs. Then the instructor erases the belt and dictates comments concerning the paper submitted. These comments are always chatty and informal and usually include personal reaction to what the student has communicated, praise of strengths or improvement, and suggestions for revisions.

Upon entering the laboratory at the next session, the student picks up his folder, places the belt on his own dictating unit and listens to the instructor's comments and suggestions. In most cases, his paper has not been marked in any way and he must find his own errors and makes his own revisions from his instructor's oral advice and hints. As the student progresses, he is encouraged to do more and more of his own proofreading with less and less specific hints from the instructor.

When the student has completed his revisions, or at any time he needs assistance, he calls on his instructor in class for a personal conference. One hundred per cent of the instructor's in-class time is spent in working with students on a one-to-one basis. Finally, the instructor tells the student either in person, or on the belt, what assignment he should undertake next. This may be a special assignment tailored on-the-spot to suit this student's special needs or he may be issued a prepared assignment belt.

Reading improvement is also completely individualized, each student's assignments being based on an extensive diagnosis of his reading skills. He may be given work ranging from basic literacy through college level reading. The emphasis is on efficient reading comprehension rather than on reading speed. A personalized program is designed for each student. Each student works independently and can progress at his own pace.

Diagnosis may reveal that a student has a marked weakness in just one or two specific reading skills such as relating sounds to alphabet or using contextual class. In this case, he will work through self-instructional materials designed to attack specifically this major weakness. These materials may be in the form of workbooks or sets of work cards and may be combined with tapes where audio support would be helpful. Other aspects of his total program can be designed so as to reinforce this particular skill.

Instructional material which previously would have been presented by lecture is recorded on dictating machine belts so that a student may listen, stop to take notes, and listen a second time to any portion or all of the lecture as he feels the need. After

unlimited opportunity to listen to the recorded instruction and to question his instructor to clear up points, the student asks for the quiz. In this, as in all laboratory requirements, the student may be retested without penalty an unlimited number of times until he achieves the objective.

Filmstrip projectors are used to improve general reading efficiency. A short line on print is presented briefly and then replaced by the next line at speeds controlled by the reader. This practice teaches the student to be more alert, and it breaks the prevalent habit of looking back at words already covered. Built into each filmstrip lesson is vocabulary improvement and a comprehension quiz. Speeds may not be increased unless the quiz scores are satisfactory.

Care is taken to be sure that the student puts these gains into practice when reading from regular printed material. The reading pacer can be set to move down the page at any given number of words per minute no matter how long the line of print or how large or small the type. The student uses the pacer while reading from any book or periodical that he may choose excepting, of course, highly technical materials and he sets the speed at the highest rate he has read successfully with the filmstrip projector.

A good supply of high-interest current periodicals is kept on the shelves in the relaxed reading area. There is also a library of almost 100 books consisting of short readings: sports and adventure stories, tales of the supernatural, and biographical sketches of sports and national heroes, Black and White. These materials are available to the student at all times for use with the reading pacer, during his free reading time in class, or whenever he wishes to visit the laboratory to read for his own pleasure.

Trade journals representing each of Central Piedmont's eight trades are on the shelves also. These journals are available to the student at all times, but requirements are set up so that the student must become familiar with his own trade journal during his communications course. He must read and report on an article from his trade journal as one requirement in oral communications; the trade journal is used as a source of information for writing assignments; and in the reading segment, a certain portion of "free reading" time must be devoted to these trade related materials.

Trade vocabulary is a fourth important course segment. Each student is given a list of vocabulary which has been selected by the faculty in his own trade area. He must learn to pronounce, spell and define a required number of these trade related terms. The spellings and definitions are learned from the list by traditional study methods; the pronunciations are given on pattern

practice tapes so that the student can listen, repeat, and listen back to each word he plans to pass off.

At one sitting, each individual may pass off as few or as many words as he wishes to undertake. He dictates the words he has prepared into the dictating unit. Then, with his list out of sight, he lets the dictating unit "call" him the list as he writes the spellings and meanings. The belt from the dictating unit is turned in along with the written work so that the instructor can evaluate the pronunciation as well as the spelling and meaning. The student is not penalized for making an error, he simply continues his efforts until he has passed off the required number of words.

During the first quarter the laboratory was in operation, certain measures were taken in an effort to evaluate the effectiveness of the program. Pre-and post-writing samples were taken to determine improvement in writing skills. Pre and post reading tests were administered to evaluate reading comprehension, vocabulary, and speed. Students were given anonymous questionnaires to tap their reactions to the methods used. Questionnaires were also given to the faculty in the communications laboratory and in the areas of the students' majors.

The results show that the students, on the average, had been able to decrease the incidence of error in their writing by 83 per cent. At the same time, writing fluency was increased so that students on the average wrote 60 per cent more -- in a timed writing situation -- at the end of their course than at the beginning. One hundred per cent of the papers in the post-sampling were judged to be "well organized" as opposed to 20 per cent in the pre-course sampling.

Pre- and post-reading tests showed an average improvement in general vocabulary amounting to 11 percentile ranks. Reading comprehension, on the average, improved by 15 percentile ranks. In spite of the fact that reading speed is not emphasized in the program, general improvement in efficiency resulted in modest speed increases. Ninety per cent of the students increased their reading speed at least 80 words per minute; 50 per cent showed increases of 100 words per minute or more.

Ninety-eight per cent of the students who completed the evaluation questionnaire reported that they prefer this course and method to traditional classes. Some of the most frequent comments were: "You work on your own weak points instead of things you already know"; "What you do is practical -- has application in your line of work"; "You proceed at your own speed and do not have to keep up with somebody else"; and "For the first time in my life,

I enjoyed an English class."

Five instructors were involved in the communications laboratory program during the first quarter. All five of them wholeheartedly endorse the method and express a strong preference for this approach over the traditional classroom. Three of these five have moved on to develop individualized instruction programs for other English courses at Central Piedmont. One of the instructors wrote: "I learned more in one quarter about what makes students want to learn than I had in all my previous experience in the traditional classroom."

The faculty in the students' major areas are pleased with the results they see and express a definite preference that their students continue in the laboratory program rather than return to a traditional English. They particularly noted a positive effect from the teaching of the trade-related vocabulary. Also, one instructor in Auto Body Repair said: "This group of boys is different from any we have had before -- they're more free to express themselves -- to enter into discussions in the shop, and to ask questions. They seem to have more confidence in their own ability to communicate."

The percentage of students who successfully completed the course during the fall quarter of 1969, the laboratory's first quarter of operation, was compared with the figures from the fall quarter one year earlier while English for trade students was still being taught traditionally. The percentage of students successfully completing the course was 30.5 per cent higher in the Communications Laboratory than in the same quarter the previous year.

Another less formal measure of the effectiveness of the course -- and the one that means the most to those of us who teach in the laboratory -- is a question we put to each student after his grades are averaged and he is about to leave the laboratory, his course complete. We say: "I know you've done good work in here, and you've shown a lot of improvement; but that's not going to do you much good unless there has been some change for you outside these walls. Can you tell whether this course has helped you in any way at all outside the lab?" The answers go like this: "Oh yes! It has helped me in <u>every</u> way, especially in my reading. I was making along about 75 on all the quizzes in my anatomy course until I had the tape on 'How to Study a Textbook.' Well, I tried the method you gave on that tape, and my grades in anatomy jumped to 95. I've improved all the way around. In my reading and my writing and everything, but one thing in particular -- the men in my Sunday School Class are amazed at how much better I can express myself. The trade vocabulary, I think, has helped me the most -- in learning to pronounce the technical terms, somehow I learned to pronounce new words I run into in my other courses."

APPENDIX: CHARLOTTE DEMONSTRATION SESSIONS

DEMONSTRATION SESSION ON AUTO MECHANICS

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We have prepared audio-tutorial materials to teach automobile electrical and other systems. These comprise an audio tape, 35 mm. slides and equipment assemblies. Instruction is self paced and the student performs operations on the equipment in accordance with directions from the tape and the slides. The student controls the movement of the projector.

The equipment consists of real auto components, with or without test equipment. The student relies on the shop manual for details. Objectives are set for each unit; there is step-by-step performance; success is indicated by "making it work"; then the student goes to the shop to apply what he has learned on complete cars.

We have had considerable success. The students like it. Each student works on a different component. We are experimenting with the possible replacement of the tape with instruction sheets to continue the individualized instruction.

There are 20 students in a section; the laboratory is scheduled for a complete half day. Student records are kept, but there are no tests.

The program frees instructor time. There is always someone in the laboratory. These, however, are not always professionals and receive low pay. They teach 22-26 hours per week and do development work.

A prerequisite for success of the program is its non-linear potentiality. Students may qualify for specialized work on completing segments of the programs. Many get jobs before they finish the two year course, but some of these return later for their AAS degree.